WHAT IS WRONG WITH ROSKILL?*

By E. J. Mishan

The Papers and Proceedings of the Commission on the Third London Airport run to nine volumes, covering between them the first three stages of the Commission's planned procedure. Under review here is the seventh volume, pertaining to Stage III.¹ It runs to over 500 pages, and embodies both the method of approach and the quantitative assessment of the Commission's research team led by Mr. F. P. Thompson, an economist formerly employed in the Ministry of Transport. I doubt whether an economist who, like myself, has had no hand in the writing of this volume could become familiar with all the aspects discussed in less than a couple of months of uninterrupted study. Nor would he be able to check all the calculations in less than about six months, and then with a goodly amount of research assistance. Since I can claim only to have perused a number of chapters — though I believe they are the more important chapters — the over-all impressions left on me have to be regarded as provisional only. Some of the more critical judgments, however, in particular those in parts III and IV, are put forward with less reservation, since they were reached only after a close scrutiny of the text. And the more general reflections at the end of this review depend neither on my over-all impressions of the Report nor on the more critical findings. They arise from a consideration of the relevance of such cost-benefit evaluations for the world we are living in.

I. COST OR COST-BENEFIT

It may be useful first to remind the reader of the limitations of cost-benefit techniques. As everyone knows, a cost-benefit analysis purports to measure in money terms all the benefits and all the costs to be expected over the future of some mooted project, and to admit the project if the sum of the benefits exceeds the sum of the costs by a sufficient margin. Under ideal conditions, the adopted criterion of a cost-benefit analysis — requiring that benefits exceed costs — can be vindicated only by a social judgment, that an economic rearrangement which could make everyone better off is "a good thing."

There are two points to notice about such a judgment. First, nothing is said about existing institutions, economic, political or legal. But in order to be a valid judgment, the criterion adopted must be independent of existing institutions. This is far from being an esoteric refinement, as we shall see later on. Second, and more obvious

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perhaps, such a judgment does not require that everyone shall be made better off, or even that some people shall be made better off while no others are made worse off. The likelihood – a virtual certainty – that some people, possibly most, will be made worse off is tacitly acknowledged. The criterion is met simply if it can be established that, on the adoption of the project, hypothetically costless transfers of money could make everyone affected better off than he was before. A project admitted on a cost-benefit analysis is, therefore, quite consistent with an economic arrangement which makes the rich richer and the poor poorer. It is consistent also with transparent inequity: irrespective of the income groups involved, the opportunities for increased profit or pleasure provided by the new project may inflict direct and substantial injury on others.

In order, then, for a project to be socially acceptable, it is not enough to show that the outcome of a cost-benefit calculation is positive – allowing, always, that the evaluation of each of the component items has been thorough and consistent. It must also be established that the resulting distributional effects are not unduly regressive, and that no gross inequities are perpetrated.

In the light of an ideal cost-benefit procedure, what can be said of this Report?

The first thing that ought to be said is that, for Britain at least, 2 the Report has aimed at a level of sophistication that will not be easy to exceed. For the most part it is clearly written and well organised. The theoretical underpinning – much of it summarised in Part I, Proposed Research Methodology, and in chapter I of Part II – is respectable, and the tone is suggestive of a determination not to forsake principle for facility of calculation. The so-called intangibles are believed to be in principle quantifiable, and the research team has not yielded to the temptation to hand back part of its brief to the political process, which had offered it to the economists in the first place. 3 There are occasional manifestations of resourcefulness and ingenuity, as well as determination, in bringing disparate considerations “into relationship with the measuring rod of money.” Nevertheless, Paragraph 1.22 (on page 43) makes it plain

2Cost-benefit studies on the grand scale are more common in the United States, a large proportion being concerned with water resources and construction of dams.

3Nevertheless, there are one or two blemishes in the proposed methodology which could be damaging in a cost-benefit analysis, though, if they were corrected in this cost-comparison report, they would not be likely to make much difference to the ranking of sites in Table 29.1. (i) On page 38 (para. 1.7), for instance, it is asserted that goods and services are to be valued at their resource costs on grounds that they “most clearly represent the real cost to the community . . . in terms of resources embodied in their production. Indirect taxes and subsidies . . . are excluded.” This is a valid convention for estimating changes in national income aggregates, but it is an incorrect principle for cost-benefit evaluations. The cost to the economy of a resource to be used in the project is determined by the value it creates in the use from which it is to be moved. Consequently, if the resource is moved from the production of some good subject, say, to a 100 per cent tax, its cost to the project must be valued as equal to the price, which is not equal to, but twice, the resource cost. (ii) Again on pp. 42–3 (para. 1.19), in the discussion on the costs of journeys to the airport, mention is made of the preference of some people for using their own cars, and the paragraph ends with the sentence: “The measure of this benefit is found deductively by observing what the travelling public is prepared to pay, in time and money, for the convenience, at least in their own eyes . . . of using their own car.” Fair enough, but no allowance is made for the additional congestion costs that are imposed on all other vehicles, or for the additional spillover effects on the rest of the population of private transport as compared with public transport.

222
WHAT IS WRONG WITH ROSKILL?  

E. J. Mishan

that the conditions mentioned above, relating to distribution and equity – though their relevance is acknowledged – are not to be taken into consideration in the assessment. For this reason, if for no other, the quantitative findings of the Report cannot be used alone to decide the issue.

The second thing that ought to be said is that the urgency is apparently not so great as we had been led to believe. If their projections of future air traffic are accepted (and they are large enough in all conscience), the airlines could go on until about 1982 using the existing facilities at Heathrow and Gatwick. Although congestion costs at the existing airports are expected to increase year by year, it will not be until 1982 that they will exceed £22 million, which is the estimated annual worth of postponing construction of the third airport.

The third thing that ought to be said is that the assessment in this volume is not, properly speaking, a cost-benefit analysis. It consists only of a comparison of the costs of the four alternative airport sites on the short list: Cublington, Foulness, Nuthampstead, and Thurleigh. And in this connection it is important to notice that the full costs of each item are not always compared; sometimes only the differences in costs are entered, or a portion of the costs in which the differences are captured. We shall find it revealing to dwell a while on this peculiarity of the Report.

This choice of a relative cost evaluation rather than a cost-benefit evaluation carries with it an implicit presumption that a third airport at any one of the four alternative sites can be justified on economic grounds. There are reasons to doubt this presumption, and we shall turn to them in part III.

In part II we concern ourselves only with the weight to be attached to the comparative figures produced by the Commission in order to rank the four alternative sites on the scale of economic desirability.

II. COSTS TO PASSENGERS AND AIRLINES

A comparison of the costs of the four sites discounted to 1975 is given by row 22 of Table 29.1 (pp. 490–1). They are ranked below in order of increasing cost:

<table>
<thead>
<tr>
<th>Cublington</th>
<th>£2.265 million</th>
<th>(£0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurleigh</td>
<td>£2.267 million</td>
<td>(£2 million)</td>
</tr>
<tr>
<td>Nuthampstead</td>
<td>£2.274 million</td>
<td>(£9 million)</td>
</tr>
<tr>
<td>Foulness</td>
<td>£2.385 million</td>
<td>(£120 million)</td>
</tr>
</tbody>
</table>

(The figures in the brackets indicate how much the cost of that particular site exceeds the cost of the lowest site at Cublington.)

It is clear that the differences between the first three sites are too slight in proportion to likely errors to be taken seriously. Foulness – except for bird-lovers, the conservationists’ favoured site – stands out clearly as the most costly of the four. One reason is that a loss of potential benefit amounting to about £44 million is chalked up against Foulness in consequence of the smaller air traffic it is expected to generate as compared with the three inland airports, all of which happen to be on the right

4If the costs are discounted to a later date, 1982, the figures above are all roughly doubled, since a discount rate of 10 per cent per annum has been adopted.
side of London to attract traffic from the North and the Midlands. In the year 2000, for example, the total number of air passengers in the country is expected to be something between 6 and 10 million less if Foulness is chosen rather than one of the others.

How significant is this difference in cost for the Foulness site? The two largest items in Table 29.1 are those for "Airspace movement" and "Passenger user cost." They account for over 80 per cent of the total costs in the table, and they both depend heavily on the value placed on passengers’ time. In particular, it is the additional time and cost of reaching the Foulness Airport site that forces the figure for "Passenger user cost" there to £1,041 million, or £152 million more than the figure for the next most costly site in this respect, Thurleigh.

Value of Travel Time
It is at such points that one is tempted to challenge the figure of 46s. per hour placed on business travel in 1968, rising to 72s. per hour (all at 1968 prices) by the year 2000. The figure is derived from an estimate of business firms’ average annual expenditure on their airborne representatives of £4,626 (in 1968), which sum includes an average business traveller’s income of £3,200. For "leisure passengers," in contrast, a mere 4s. 7d. an hour is deemed appropriate. Both figures are assumed to rise over time at 3 per cent per annum.

Since these estimates, made in consultation with the Ministry of Transport, are likely to be controversial, the Report makes some additional calculations on the side, based on alternative evaluations of the worth of people’s time. If, for instance, the value of business time is reduced by 25 per cent of the above figure, and leisure time is not valued at all, the total costs are so revised that the bracketed figures giving the differences in cost for the four airports become those shown below:

<table>
<thead>
<tr>
<th>Airport</th>
<th>Difference (Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurleigh</td>
<td>(0)</td>
</tr>
<tr>
<td>Cublington</td>
<td>(£10 million)</td>
</tr>
<tr>
<td>Nuthampstead</td>
<td>(£28 million)</td>
</tr>
<tr>
<td>Foulness</td>
<td>(£42 million)</td>
</tr>
</tbody>
</table>

Clearly there is some margin to be got by playing around with such figures, and this makes any choice on economic grounds alone appear somewhat less satisfactory. The figures would appear less reliable still, and the differentials would narrow further, if one could reasonably object to the notion of basing the value of time on a person’s earnings. First of all, it is meaningful to say of a person that he values his leisure very little but that he dislikes his work a lot. Travel time for, say, a holiday-maker is simply one way of using his leisure. And it is not to be regarded as equivalent to work unless, at the margin, the person is indifferent as between, say, an hour spent on the train and an hour at work.

Secondly, the assumption of putting a positive value on the extra hour or so of businessmen’s time if Foulness is chosen is also open to challenge. Dividing a firm’s

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5In the limiting case, if no value at all were placed on the time required to reach the airports, the cost ranking of the four airports (with the cost differences given in brackets) would be: Thurleigh (0), Foulness (6), Cublington (7), Nuthampstead (21).
annual expenditure per travelling representative by the number of hours he is supposed to work produces an average hourly figure which, it can be argued, has no economic significance in this connection. The correct economic concept is the "opportunity cost" to the firm, or rather to the country, of an hour or so’s delay to its representative. Notwithstanding assertions to the contrary, indivisibilities of time are important here. If the delay were of a full day, it could matter to the individual firm – though, again, it might not matter that much for the country. If the difference in delay were of an hour’s duration, one might think up circumstances in which it would matter. But such circumstances would not be relevant to the choice under consideration in the Report. If Foulness is chosen, it is not to be supposed that many firms could make profitable use of the extra hour or so of representatives' time saved in travelling to the airport. To most firms, I should imagine, it would make no difference at all. The representative would simply have to get up a little earlier on the appointed day and travel a little longer. And if this is a disutility for him, it has to be taken out of the category of business time and put into the category of passengers' leisure time.

**Airline Operation Costs**

Let us suppose, however, that we accept the figures in Table 29.1 as not seriously misleading. We may still wonder what importance we are to attach to them. Large though the absolute figure of £120 million is, it appears as only about 5 per cent of the total discounted costs of any of the sites. Actually, it is a very much smaller proportion of the total future resource costs of any of the airports; for, as mentioned, the table does not reveal all of the costs. The full airport construction costs are given. So also are all the "passenger user costs" – the resource costs of travelling to each of the four sites, plus any difference in the "disbenefits" of travelling to one airport site rather than another. But the cost of the largest item in the table, "airspace movement", is only a fraction – presumably unknown – of the total airline operation costs over the future. For, on the assumption that, whichever site is chosen, all the aircraft will fly the same distances to their destinations from some common boundary containing the four sites, the authors of the Report simplified their work by calculating only the costs of reaching this boundary from each of the four sites (allowance being made for the somewhat smaller air traffic expected if Foulness were chosen). If, instead, total airline operation costs were included, the discounted value of total resources could be more than double the figures given in row 22 of Table 29.1. Accepting the Report's valuation of time, the excess cost of Foulness would be more like 2\( \frac{1}{4} \) per cent of the value of the total resources involved. On the Report's optional calculation of business and leisure time, the excess of £42 million for Foulness comes to less than 1 per cent of the value of total resources. On margins thus small, an economic case against the choice of Foulness cannot be seriously maintained.

**Supersonic Flight**

Finally, nothing is said about the particular sorts of damage currently associated with supersonic flight. I have been told that the omission was deliberate, and predicated on the recent White Paper of the previous government, in which it was stated that the Concorde would not fly at supersonic speeds over land. Such a statement of intent may reasonably be regarded with suspicion. If we suppose that there is a
chance that, for any of a half-dozen reasons the aircraft industry or the airline companies can think up, supersonic speeds over land may some day become "essential," the choice of any site other than Foulness would leave us in a sorry and angry state.6

III. IS A THIRD AIRPORT JUSTIFIED?

Let us now turn to what I regard as the major defect of the Report: that the economic case for the construction of a third London airport was not a part of its terms of reference. In a brief chapter on "The Value to the Nation of a Third London Airport," a number of considerations were put forward to convince the public that the benefits were almost self-evident: the popularity of the postwar package tour, it was pointed out, is sure to grow immensely. So also is business travel, conceived as a "lubricant" of international trade through which the blessings of technology are spread throughout the world. Besides, airports are generators of high income in the surrounding areas, and the growth in traffic should benefit the aircraft construction industry and industry in general; and much more of the same sort of froth. I suspect that this industry sales talk got included in the Report only on the insistence of interested parties. It contrasts with the more professional judgment shown elsewhere and is perhaps not expected to be taken seriously. There is, however, another argument in the earlier part of the chapter which, if it were accepted, would go some way toward establishing a presumption in favour of sufficient benefits to justify the undertaking. This takes the form of a belief that the expected revenues from passengers will be able to cover all the future resource costs involved in airline flights, and that, in addition, the estimated cost of all "disbenefits" – noise, dis-

6There are deficiencies also in the measurement of other disbenefits. Their potential impact is probably less significant than that of aircraft noise, but they are worth touching on. For churches located off the airport site, the social losses entered are no more than the costs of strengthening the structures to withstand vibration. On the other hand, the social loss resulting from the demolition of churches and other buildings on the airport site is taken to be equal to the sum of their current market costs, as indicated by their insurance values. For architecturally undistinguished churches there need be no objection on secular grounds. But for irreplaceable churches of unique architectural value, this is obviously unacceptable. If Westminster Abbey is insured for £200,000 against destruction by fire, it does not follow that the nation at large is indifferent as between having Westminster Abbey or the £200,000. But this is the implied logic of accepting the fire insurance figure as the loss equivalence. The loss arising from damage to recreational activities is conventionally treated and arbitrarily quantified. Thus, on page 418 (para. 24.24) we read: "Most of the recreational activities affected by aircraft noise, of which visiting historic houses, hunting, golf, fresh water fishing, predominate, are located within moderate noise levels. It was therefore assumed that visits would, on average, be reduced by 10 per cent, and that this would be directly reflected in lower admission revenues. It can be deduced from conventional demand analysis that this reduction in participation could correspond to a reduction of about 20 per cent in the consumer surplus enjoyed by those continuing to visit." The tone is tentative here: 40 per cent, perhaps 60 per cent, would be no less acceptable. But, frankly, the statement makes no sense as it stands. Admissions could change very little, and yet the loss be far in excess of 20 per cent in the consumer surplus enjoyed by those continuing to visit." Indeed, the method is in conflict with the guiding principle laid down on page 39 and elsewhere: that the loss of an existing facility is to be measured by the sum necessary to restore the person's original welfare.
WHAT IS WRONG WITH ROSKILL?

E. J. Mishan

amenity, demolition of historic buildings, etc.--could be more than covered by an increase in revenue from raising landing fees.

The Intangibles

Before this presumption is accepted, it is necessary to examine the estimates made of the value of the "intangibles," more particularly of the value of the loss of amenity and recreation to the community, or rather to examine the methods used by the authors to estimate these values. For in a comparative cost analysis, whatever the magnitudes of the "intangibles," one of the alternative projects has to be chosen. Under this constraint, the only relevant question is whether or not introduction of the "intangibles" will alter the cost ranking of the alternative projects. In a cost-benefit analysis, in contrast, one question to be answered is whether or not any one of the alternative projects is economically feasible. The magnitude of the "intangibles" can, therefore, be decisive.

By and large, the conceptual underpinning of the report is, as indicated earlier, sound enough. It is in making the transition from the concepts to the measurement of the relevant effects that one begins to feel critical of the particular devices, ingenious though they sometimes are, which the authors make use of in order to place money values on the damages suffered by others. Thus, in evaluating the potential disbenefits, the authors lay it down on page 39 that "The analysis has been guided by the principle of accepting the scale of values apparently held by the people concerned, as revealed by their choice and behaviour. For potential possessions or activities, they are valued at what people would be prepared to pay to acquire them. For existing possessions or activities, things are valued at the minimum which people would be prepared to accept as just compensation for their loss." As a statement of intent, this reflects the doctrines of modern welfare economics, and is unexceptionable. But, in the event, what do they do?

Households Displaced

For those households moving out because of the airport, the loss suffered is reckoned as (a) estimated depreciation of their property, plus (b) removal expenses, plus (c) "consumer surplus." Thus, if the market value of a house before the airport is sited in the area is £10,000, but the family enjoys a consumer surplus of £2,000 on it (that is, the family would not sell it below £12,000) and would require £500 for removal expenses, a fall in the market price to £7,000 would involve the family in a total loss of £5,500—equal to (a) £3,000, plus (b) £2,000, plus (c) £500. The estimate of (a), depreciation, was derived from consultations with estate agents and by reference to depreciation of properties in those areas around Gatwick and Heathrow that are subject to various degrees of aircraft disturbance. The estimates for (b) and (c) together, removal expenses plus consumer surplus, resulted from a sample survey in which householders were asked the following question: "Suppose your house was wanted to form part of a large development scheme and the developer offered to buy it from you, what price would be just high enough to compensate you for leaving this house (flat) and moving to another area?" (p. 381). Subtraction from this subjective price of the existing market price provided an estimate for (b) and (c). A truthful answer to this question would be a satisfactory measure of the subjective value of the house only if the move contemplated by the householder
were one that would take him completely out of the noise area (or, more precisely, if there already was some noise in the area, to another area suffering from no greater noise). Yet the question posed does not state how far the householder will have to move. Mention of a developer must surely give the householder the impression that a few acres, within which his house happens to be situated, are required. It would not occur to him that he would have to leave the neighbourhood. And it is, indeed, entirely a different affair if the household is to be displaced either because the site is needed for an airport or because the noise will be all but unbearable. This can be a real wrench for the family. A change of job location, a change of school location, to say nothing of a loss of friends and neighbours, have then to be anticipated. The figures used by the Report in this connection are, therefore, certain to have understated the value of expected losses.

A more obvious reason why the figures derived from the sample answers to the above question underestimate the amount of compensation is that 8 per cent of those asked said they would not move at any price. The compensatory sum for such a householder was placed, arbitrarily, at £5,000. If these people mean what they said, the compensatory sum would be "infinite" and this would obviously wreck any cost-benefit criterion. Yet, if the answers are believed, consistency of principle requires that an "infinite sum" be entered. It may be that a good interviewer would have elicited a finite sum, though well in excess of £5,000 – perhaps £50,000? or £5 million? And, though unlikely, it is not altogether inconceivable that for some older, or unworldly, people all that money could buy for them would not suffice as compensation for having to live elsewhere. What is certain, however, is that by setting this arbitrary upper limit of £5,000 the authors' figure for "consumer surplus" can be made much smaller than the "consumer surplus" figure that would have emerged by an uncompromising application of their own adopted principles.

The disbenefits of an increase of the number of flights associated with the establishment of a third London Airport is an underestimate for another reason, one which the Report itself touches upon – though possibly without recognising its full significance (inasmuch as it applies to the evaluation of traffic noise in general). On page 368 (para. 20.12) it is observed that "People buying a house affected by aircraft noise would be very naive if they did not expect an increase in noise, at least for the next ten years or so." Precisely! If noise is to increase over the next ten years – and, on present trends, who doubts it? – a family will have to search very much farther afield if they are to discover an equally congenial neighbourhood with the same degree of quiet. It is scarcely possible for them to discover an area which has reasonable amenities and facilities within commuting distance of work and at the same time is expected over the future to be as quiet as is their present habitation today. Anticipating the spread of noise everywhere, the family, in effect, have only a limited choice: that of staying in the existing area or of moving to a new one, where both areas are expected to become much noisier. Indeed, as the level of noise in general increases, the perceived differences are likely to decrease, and so also, therefore, will the sum of money necessary to induce the family to move. But the disbenefit suffered from each contribution to a rising noise level is properly valued only by a sum of money large enough to compensate the family for the loss of the original low-noise situation, this being the sum that will enable them to maintain their original level of welfare.
WHAT IS WRONG WITH ROSKILL?

E. J. Mishan

Households Remaining in Neighbourhood
The expectation of an increase over the future in the volume and spread of noise is yet more significant in evaluating the loss to the larger population who will continue to live within the noisier zones about the airport – those remaining within the 35 NNI contour line.7 The statement quoted on page 39 of the Report implies that the measure of the loss experienced by such people would emerge from a truthful answer to the question: “What is the minimum sum you would accept to reconcile yourself to the increase in aircraft noise to which you are, and in the future will be, subjected?” Yet the loss for this larger group was measured, ultimately, by the expected depreciation of their property alone – that is, no more than the (a)-component of the loss to the household that is moved from the airport site. A good deal of finesse was, of course, employed in working out the exact depreciation to be used for each sort of house in each sort of zone, allowance for sensitivity being made by using the figure for depreciation as the median point of a distribution of noise sensitivity. Again, however, if noise is expected to increase over time, such measures are sure to understate the loss. For as noise grows over time the absolute difference in noise between any two points on a map may be unchanged, and the difference in property values will also remain unchanged – yet people living in areas about these two points will be worse off. Indeed, as noise increases over time, it is far more likely that differences in noise will diminish within a given area, and the effect therefore on property values will be smaller—a prospect with which the estate agents consulted can be assumed to be familiar. In such circumstances, the use of differentials in property values does not only understate the loss; as an index of loss it is wholly perverse. In the limiting case in which there is no escape whatever from aircraft noise in all inhabited areas of the country, noise being everywhere uniformly unbearable, noise-induced differences in property values will vanish; the measure of loss for all of us, on this indicator, being zero.

In connection with noise, there is yet another weakness, which at first glance may seem a quibble but in fact is a critical weakness of the cost-benefit technique when extended to non-market disbenefits: its almost unavoidable asymmetry in the weighting of “imponderables.” To illustrate in the present instance, the authors confine themselves to noise within the 35 NNI contour line, apparently on the grounds that the effects of aircraft disturbance below 35 NNI are difficult to determine. Now the population within the zones between, say 20 NNI and 35 NNI is several times as large as that within the area enclosed by the 35 NNI contour. Despite the admirable statement of intent on page 39, no loss of welfare is imputed to this larger population. That decision can be justified only if it is known that all families are perfectly indifferent to the increase in noise up to 35 NNI. Yet there will surely be a proportion of such families who, at least, will come to resent the extra noise.

Illusory Benefits of Air Travel
Clearly the reaction of numbers of people in the larger population to noise levels below 35 NNI involves a judgment about significance. It is a purely subjective judgment, however, and it is in just such circumstances that the economist can be

7 NNI is an abbreviation of Noise and Number Index. It was developed as an index of aircraft noise annoyance by the Committee on the Problem of Noise (Cmd. 2056).
misled by a "misplaced concreteness." I am not suggesting that the economist is visibly stirred, as we imagine the technocrat to be, by a vision of a vast airport having all the familiar manifestations of highly organised bustle and breathlessness. I am suggesting, however, that market-formed prices and quantities are regarded as somehow more solid than the values attributed to the "intangibles." If a person is willing to pay £50 for a flight from London to Palma, there is, indisputably, a figure of £50 of benefit to play with. If the resource cost of the flight were shown to be £40, the economist would have no hesitation in claiming an excess benefit of (at least) £10. Such a flight may well be, for the greater number of future passengers, a whimsical form of indulgence, a fashion good of which the deprivation would be resented in varying degrees – though probably much less as time passed and alternative opportunities were discovered.6

For business travellers, the case is simpler yet. For most of them the company pays air fares from business expenditures, so that, taking income and corporation taxes into account, the true cost to the firm is less than half the fare. Thus, the marginal value of the air trip to the business firm is, presumably, well below the marginal resource cost.

With the advent of air travel, the number of conferences, business, professional and academic, has been growing at an exponential rate. The same people who now rush about the world reading the same paper at a dozen conferences in as many months are those who, in quieter days, would have found time to read, write, and reflect. At any rate, the value of such trips cannot be measured by the air fare, simply because air travel is not, in such cases, one of the alternative goods a man can buy subject to a budget constraint. The conferees do not pay their own fares. And it is doubtful if the benefit they personally expect to derive from these occasions is such that many would attend the conference without additional inducements. Only the conveners of the conference can be said to benefit. Calling a conference is one among the alternative ways of disposing of funds provided by governments and businesses guided by the principle of self-promotion. Conference-creating activity is one of many growth industries produced by aircraft travel, and one of the many prestige uses of the massive funds accumulated by business foundations. The social benefit of all this hectic to-ing and fro-ing, however, is difficult to evaluate – which is no reason for not assuming that it is probably negative.

There is room for speculation here, but not for doubt, that much of the assumed benefit of air travel is illusory.

Asymmetry in Cost-Benefit Analysis

The purpose of carping at the nature of these assumed benefits is to draw attention to the asymmetry referred to, which arises, in the last resort, from institutional limitations. Whether he is motivated by strong desire, by the spirit of over-indulgence, or by spurious business need, if a man pays £50 twice a year for an air trip a benefit of at least £100 will be entered against the cost of the resources used in the two flights. In contrast, the disbenefit suffered by a person living within the 35 NNI – 20

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6I do not underestimate the extent of the potential protest, initiated by business interests with the support of mass media and inflated by the sheer joy of expressing protest. I speak only of the individual discomfort after the ban against this sort of travel has been generally accepted. Anger at being deprived, or the pleasure of expressing it, is no measure of the loss of utility of a thing.
WHAT IS WRONG WITH ROSKILL?

E. J. Mishan

NNI zone, whether it verges on fury for a hypersensitive minority\(^9\) or whether it is
the bearable annoyance of the majority, does not enter the grand computation at all.
Yet it is, at least, a moot point whether the loss of welfare to any person subjected
daily (and perhaps nightly also) to this *initially* lower level of noise-annoyance
should properly be thought of as meriting no consideration as compared with the
gain in welfare of any person who, at some time in the year, does the flight to Palma,
or to Hong Kong for that matter.\(^10\) If institutions happened to be the reverse
of what they are for this particular case; if, say, the universe were so designed that
people could freely sell their quiet in a competitive market at the ruling price while,
on the other hand, owing to some institutional factor (say, the cost of fare collecting
was fantastically high), a market in airline services were not possible, we should
appreciate the asymmetrical treatment better. For then, *all* the disbenefits from noise
would be priced on the market, and they would grow with the increasing noise of
aircraft. They would be counted as part of the “solid” price-quantity data, and would
be added to the resource costs on the same economic principle – that payment has
to be made to induce people to part with things they value, whether it be their
property rights, their leisure, or their peace and quiet. And both in virtue of the
change to a correct method of evaluating these disbenefits, and in virtue of the
extension of the market to the population as a whole, the resulting loss figure would
probably be many times that estimated in the Report. On the other hand, in keeping
with the current methods used in estimating the values of non-market items, the
benefits of the trips would be calculated only for a fraction of the potential number of
beneficiaries. This would be the fraction having greater claims according to some
benefit-scale beyond which the economist would declare it difficult to believe that
benefits were at all substantial. Moreover, if the methods used in estimating benefits
were deficient in the same respects as those used by the Report in estimating dis-
benefits, the total value of the benefits calculated even for this fraction of the bene-
ficiaries would be an underestimate.

In sum, under such hypothetical institutions, the outcome of a cost-benefit calcu-
lation conducted on the lines of this Report would be vastly different from that
reached under the existing institutions, and could fail entirely to justify the building
of a third London airport – from which we may conclude, at the very least, that
the methods employed in the Report do not meet the conditions of an ideal cost-
benefit analysis as laid down at the beginning of this article.

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\(^9\)On page 365 the authors refer to the survey conducted by the Committee on the Problem of Noise. In the *quietest* areas covered by the survey, 10 per cent of the population were classified as “seriously annoyed”. In the noisiest areas, on the other hand, only 10 per cent denied that aircraft noise was a nuisance, and 10 per cent claimed a “minimal degree of annoyance”, leaving 80 per cent claiming more than a minimal degree of annoyance.

\(^10\)It might be objected that the person on the ground may, at some other time, be an air passenger on his way to Palma or Hong Kong. But this, as it happens, makes not the slightest difference to the calculation. His losses are no less real for his having benefits also, and vice versa. Nor does the fact that a person who resents aircraft noise also travels by air constitute evidence that, *on balance*, he prefers air travel along with the accompanying disbenefits to no air travel at all. Evidence of the latter proposition must await developments in which he is given the choice of being “grounded” without any aircraft noise or of putting up with the noise along with the opportunity of flying. This sort of choice is not provided by the market, nor does the government at present look like presenting it to us.
IV. SOCIAL COSTS AND EQUITY

The conclusion of Part II was that, on alternative—and, in my opinion, more plausible—estimates of the value of passengers' time over the future, the cost differences between the four sites as a proportion of total resource costs become so small as to be unreliable for the purpose of economic ranking.

In Part III I gave some reasons for doubting whether, indeed, the construction of a third London airport could be justified by a respectable cost-benefit analysis. The chief reason I gave was that the methods used for the estimate of the benefits and the disbenefits are not independent of existing institutions: because the benefits are registered largely as market phenomena, and disbenefits largely as "intangibles," the asymmetry of treatment tells heavily in favour of the benefits.

This reason is reinforced when it is discovered that a number of "intangible" disbenefits have been omitted altogether from the Commission's calculation. There may be some justification for these omissions in a study of cost comparisons; the evidence may suggest that they differ little as between one site and another. But in a cost-benefit study undertaken to establish economic feasibility such disbenefits must be counted. I mention two of these below, neither of which is negligible.

(a) Loss of life. Per million passenger miles fatalities may be falling. But what matters in a cost-benefit calculation is the expected rise in absolute numbers attributable to the rise in numbers of passengers brought about by a third London airport. If choice of Foulness implies fewer passenger flights over the future, loss of life will be correspondingly smaller also—something the Commission did not take into account.

(b) Most important of all, however, is the destruction of natural beauty at home and abroad. This disbenefit is sometimes rudely referred to as "tourist blight"—a phenomenon of postwar affluence that has already caused irreparable destruction, all over the Mediterranean area and far beyond, to places of once rare scenic beauty, woodland, coastline, lakes and islands.\[11\]

The social costs inflicted as a result of air travel facilities may be ignored by governments, but a comprehensive cost-benefit analysis simply cannot ignore them. If they appear intractable to existing methods of computation, the economist must say so, in which case an otherwise favourable cost-benefit calculation must be deemed inconclusive.\[12\]

Finally, the economist is interested not only in the question whether a given project yields an excess of benefit over cost, but also in the optimal operation of an existing or future project.

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\[11\] I refer not only to the disfiguration of innumerable coastal resorts, once famed for their beauty, as a result of frantic "development" in the attempt to accommodate increasing numbers: these are losses to be borne by future generations as well as ourselves. I refer also to the increasing discomforts endured in popular resorts in consequence of the greater numbers of people and the greater traffic. Indeed, in the expectation that in this respect matters can only get worse, there is every incentive to add to the crowds by visiting such places sooner rather than later. The reader will readily appreciate that the economic issue is not who should travel, but (thinking in terms of the spillovers borne by the intra-marginal tourists today and other generations to come) how many.

\[12\] The otherwise excess benefit over cost may be provided by the economist so allowing the public to judge whether such a figure compensates for the damage to be expected over the future.
WHAT IS WRONG WITH ROSKILL?

E. J. Mishan

From Table 4.6, on page 86, one gathers that the number of air passengers taking off in the London area is expected to increase from 18 million per annum in 1969 to 294 million in 37 years’ time. Reference to such figures would seem to leave no room for doubt of the “need” of a third London airport, and probably of a fourth and fifth also. After all, for every single air passenger today there will be, according to these predictions, as many as seventeen in 37 years’ time. And if fares continue to remain much the same relative to the prices of other services, and if there is no restriction on airports or air travel, some of us may live to witness the grand spectacle. But, inasmuch as air travel does impose disbenefits on the public, proper concern with allocation requires that fares be raised to take account of them. If this were done, the numbers would not rise nearly so rapidly. They might hardly rise at all, and the need for a third London airport might not then be in the least apparent. For the disbenefits do not consist only of the noise annoyance, fearful as this is going to be,\(^1\) and increased air pollution – which disbenefits, be it noted, contribute to a spreading background of pollution and perpetual noise, by reference to which further aircraft and automobile projects are the more easily justified by cost-benefit techniques, since the perceptible contribution of each project to noise and air pollution that are already so bad is obviously limited.\(^2\) As already indicated, the chief disbenefit, tourist blight, is the most difficult of all to measure. The popularity of package tourism need not be questioned. Let us accept airline receipts as a measure of benefit. We need attend only to the “spillover effects” each additional person imposes on all others, present and future, but of which he himself takes no account. Indeed, not being “very naive” either, the would-be traveller will expect tourist blight to rise over the future and will hasten to travel the sooner before the destruction is complete.

Measuring these adverse spillover effects would, as suggested, present some difficulties. In view of the commercial interests at stake, and in view of the commitment of governments to compete for a share in this growing market (for fear of losing on balance-of-payments account), research into methods for their quantification would also be a thankless task. As things stand, however, the process of destruction through mass tourism, instead of being slowed down by taxes high enough to cover the marginal spillover effects, is, on the contrary, accelerated by subsidies. In view of the magnitude of these spillovers, it is high time that governments began to think in terms of stiff taxes on air travel. Where the fare may cover only a small part of the social cost, a very roughly calculated tax is almost certainly better than no tax at all – even if it should eventually be found to reduce air travel below the optimum level.

\(^1\)Unless some effective aircraft-noise preventive device is invented. This does not seem too likely just now, particularly as private and public airlines have no strong incentive to undertake such research – an incentive they would have if they were required to compensate the victims of noise pollution.

\(^2\)As has been pointed out frequently during the controversy on noise, the ground traffic is already so heavy in built-up areas that the addition of aircraft noise makes no great difference. So, too, once a third airport is built and the aircraft noise level rises over time and extends over the country, it will be that much easier to justify further noise-creating projects, including a fourth and fifth London airport.
Growth of Public Protest

Let me conclude with a more general reflection. There are the beginnings in this country and abroad, particularly in the United States, of a strong anti-disamenity movement among the public. At present, political parties are trying to absorb some of its force. My belief is that they underrate the passion behind the protest, and its growing appeal, not least among the young. The movement shows every indication of growing rapidly in the next few years, and also every inclination to achieve its aims by large-scale political changes rather than by "tinkering with the system".

Cost-benefit techniques are, indeed, becoming more sophisticated. But they may be too late to exert much influence in the choice of projects which can be related to the "quality of life" issue. A Report such as the present one, excellent as it is, paying lip service to right principles and secure within its terms of reference, may have the unexpected effect of contributing only to the public's growing impatience with economic expertise, and perhaps with economics in general.

One reason for this impatience is that in such economic calculations equity is wholly ignored. If indeed, the business tycoons and the Mallorca holiday-makers are shown to benefit, after paying their fares, to such an extent that they could more than compensate the victims of aircraft spillover, the cost-benefit criterion is met. But compensation is not paid. The former continue to enjoy the profit and the pleasure; the latter continue to suffer the disamenities. Another reason for growing impatience is even more compelling. In an age of supposedly increasing prosperity, the choice of a more wholesome life than that we seem to be moving into should, it seems, be technically feasible. Yet, despite a succession of governments overly obsessed with economic growth, we are being offered year by year continuously less choice in the one factor most crucial to our welfare – the physical environment in which we live, and in which we are fast being submerged.

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